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ABSTRACT

This document presents a review of the research on experiences outside of the classroom that may affect student achievement during the high school years, focusing specifically on the areas of family influences, peer influences, part-time employment of students, and student participation in extracurricular activities. It reports on studies of familial influence on student achievement which have shown that family social class is highly correlated with school success, but that the relation between school performance and either family structure or maternal employment status is far less substantial than is widely believed. Research on peer influences is reviewed which suggests that most peers seem to encourage, rather than discourage, academic success. Studies on part-time employment and student achievement are reported which suggest that employment in excess of 15 hours per week during the school year may adversely affect high school students' school performance and investment in school, especially among students who begin working when they are sophomores or juniors. Also discussed are studies examining extracurricular participation, most of which focus almost exclusively on interscholastic athletics. Findings from these studies are reported which suggest that participation in extracurricular activities is more likely to enhance than interfere with high school students' academic aspirations or achievement. One hundred and thirty-five references are included. (NB)

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NONINSTRUCTIONAL INFLUENCES ON HIGH SCHOOL STUDENT ACHIEVEMENT: THE CONTRIBUTIONS OF PARENTS, PEERS, EXTRACURRICULAR ACTIVITIES, AND PART-TIME WORK

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EXECUTIVE SUMMARY

NONINSTRUCTIONAL INFLUENCES ON HIGH SCHOOL STUDENT ACHIEVEMENT: THE CONTRIBUTIONS OF PARENTS, PEERS, EXTRACURRICULAR ACTIVITIES, AND PART-TIME WORK

In the recent rush of concern over the ways in which high schools can respond to issues such as declining achievement scores or rising dropout rates, policy-makers, researchers, and educational practitioners have focused their suggestions for school reform on influences on adolescent achievement that occur within the boundaries of the school or classroom. This article, in contrast, reviews research on experiences outside of the classroom--in the family, the peer group, the extracurricular setting, and the adolescent work place--that may affect student achievement during the high school years.

With respect to studies of familial influences on student achievement, research on family background indicates that family social class is highly correlated with school success, but that the relation between school performance and either family structure (i.e., number of parents in the home) or maternal employment status, once social class is controlled, is far less substantial than is widely believed. Studies of family processes indicate that students perform better in school when they are raised in homes characterized by supportive and demanding parents who are involved in schooling and who encourage and expect academic achievement.

With respect to research on peer influences, studies suggest that, although peers are not as influential as parents in shaping students' academic efforts or aspirations, most peers seem to encourage, rather than discourage, academic success. However, several studies indicate that many peer groups, especially those of low-income minority youth, are suspicious of outstanding achievement and intolerant of those who flaunt their scholastic accomplishments.

In general, studies of part-time employment and student achievement suggest that employment in excess of 15 hours per week during the school year may adversely affect high school students' school performance and investment in school, especially among students who begin working when they are sophomores or juniors. Additionally, when large numbers of students in a school are employed, the organization may be negatively affected by diminished student involvement in school, and lowered expectations of students by teachers.

Finally, research on extracurricular participation, which focuses almost exclusively on interscholastic athletics, suggests that participation in these activities is more likely to enhance than interfere with high school students' academic aspirations or achievement. However, it appears that once background characteristics that differentiate participants from nonparticipants are taken into account, the influence of extracurricular activities is modest.

Interestingly, the effects of athletic participation appear to be strongest among students with the least promising backgrounds for academic success.

Overall, the literature suggests four themes that may be useful in the development of a more general model for further work in this area. First, students achieve more in school when significant others around them, in and outside of school, adults as well as peers, value academic achievement. Second, students achieve more in school when those around them, especially adults, are proactively involved in behaviors that lead to academic success. Third, competing demands from nonschool activities may depress academic performance when these demands are time-consuming and do not in and of themselves relate to academic responsibilities. Finally, academically more marginal students are more susceptible to the effects--positive or negative--of noninstructional influences than are youngsters whose footing in school is more secure.

INTRODUCTION

In the recent rush of concern over the ways in which high schools can respond to issues such as declining achievement scores or rising dropout rates, policy-makers, researchers, and educational practitioners have focused their suggestions for school reform on influences on adolescent achievement that occur within the boundaries of the school or classroom. As a consequence, much research has been devoted in recent years to variations in school organization, teaching practices, and curriculum and their relation to adolescent achievement and engagement. Indeed, it would not be difficult to come away from this literature with the impression that the extent to which adolescents learn in school is entirely dependent upon what takes place within classroom walls. Teachers and school personnel recognize, however, that students' behavior in high school is affected by many factors beyond their experiences in the classroom, but little is understood about the ways in which such factors are related to student performance in school. These noninstructional influences[1] on high school student achievement are the focus of the present review.

In this article, we review and critique the literature on factors outside of instruction that may potentially affect student achievement during the high school years. Our interest is specifically in four domains of influence: the family, the peer group, the extracurricular setting, and the adolescent work place. Systematic reviews of familial (e.g., Weston & Weston, 1987), peer (Epstein & Karweit, 1983), work (Greenberger & Steinberg, 1986), and extracurricular (Holland & Andre, 1987) influences on young people's development exist, but no systematic review of studies concerning influences on student achievement compares and contrasts the nature and significance of influence across, as well as within, these different domains.

Considering these domains of influence in isolation from one another has limited our understanding of noninstructional influences on student achievement in two significant respects. First, it is difficult to determine if there are transcontextual themes present in the literature--commonalities across contexts that inform our understanding of student achievement and engagement. Such transcontextual themes, if they exist, are important to articulate, for they may form the basis for a more general theory of how and under what circumstances institutions can facilitate scholastic success. Second, considering these domains separately has limited our understanding of how various domains of influence act together--as mediating and as moderating influences--in influencing student performance. For example, studies of work and family in isolation do not examine whether the impact of employment on student performance is moderated by certain types of parenting practices.

Our orientation to the study of noninstructional influences is an ecological one, and we draw heavily on concepts introduced into the study of human development by Bronfenbrenner (1979, 1986; Bronfenbrenner & Crouter, 1983). In the review that follows, we use Bronfenbrenner's perspective to

organize and critique the literature on factors outside of school that affect the behavior and performance of adolescents in school. Before discussing our framework, a few words about the study of school achievement in ecological perspective are in order.

Adolescent Achievement in Ecological Perspective

For the most part, the study of student achievement has been restricted to what Bronfenbrenner (1979) would call a "microsystem" analysis--the study of the classroom or school as a self-contained system. By its very nature, the study of noninstructional influences on achievement places student behavior and development in a broader context. It moves the discussion to the level of the "mesosystem"--an analysis of the linkages between the school context and the other settings (i.e., home, peer group, work, and extracurricular activity) in which students live. The simple recognition that there are noninstructional influences on school behavior is an important step in an ecological direction.

Unfortunately, however, the study of noninstructional influences to date, as we shall see, is limited by its own unique type of narrowness. Few studies take into account variations within the noninstructional domains of influence. Fewer still consider processes of influence that may mediate the impact of noninstructional experiences on school performance. Virtually none examine characteristics of students that may moderate these processes of influence. As a consequence, we understand very little about specific experiences outside of school that influence student performance, less about why these experiences have the effects that they do, and even less about the circumstances under which these factors have stronger or weaker effects.

The review that follows is organized in the following fashion. Because domains of noninstructional influence are rarely examined conjointly, our first level of organization divides the literature into studies of the four noninstructional domains: (1) the family, (2) the peer group, (3) part-time work, and (4) extracurricular activities. Within each of these subsections, we consider four types of studies: (1) **simple studies of context**, in which students who do participate in the noninstructional setting of interest are compared to those who do not along some index of school achievement; (2) **differentiated studies of context**, in which variations within the noninstructional setting of interest are examined in relation to variations in student achievement; (3) **studies of processes of influence operating within contexts**, in which variations in factors presumed to mediate the relation between noninstructional influence and student achievement are examined; and (4) **studies of person-process-context interactions**, in which characteristics of individual students presumed to moderate the effects of noninstructional factors are examined in interaction with processural and contextual factors. In a final section, we identify major gaps in the literature and make recommendations for further research.

THE INFLUENCE OF THE FAMILY ON STUDENT ACHIEVEMENT

By definition, studies of familial influences on student achievement transcend the most simple level of analysis, that of simple studies comparing students who participate in the context with those who do not. Since virtually all adolescents live in a "family", studies of familial influences on student achievement focus on between-family differences related to demographic factors such as socioeconomic status, maternal employment, or family structure (i.e., differentiated studies of the family as a context); or within-family processes of influence, such as parenting techniques or parental encouragement or parental involvement in school (i.e., studies of mediating processes). Occasionally, the literature on familial influences on adolescent achievement includes studies of student characteristics that moderate the influence of familial processes (i.e., studies of person-process-context interaction).

Differentiated Studies of the Family as a Context

Studies that contrast students from family groups that differ with respect to socioeconomic status, maternal employment, and family structure are numerous, and extensive reviews of these literatures are readily available elsewhere. For this reason, we do not consider these literatures in detail here. In general, although these bodies of research provide reasonably consistent evidence about the relation between demographic factors and school achievement during adolescence, they are frustratingly devoid of considerations of mediating processes. Most researchers in this area have employed what Bronfenbrenner has called a "social address" model of influence, in which the focus is on comparisons of students "living in contrasting environments as defined by...social background" (1976, p. 724). In his words, these studies are limited:

> No explicit consideration is given...to intervening structures or processes through which the environment might affect the course of development. One looks only at the social address--that is, the environmental label--with no attention to what the environment is like, what people...are doing, or how the activities taking place could affect the child (Bronfenbrenner & Crouter, 1983, pp. 361-362).

According to Bronfenbrenner (1986), social address studies are useful when applied to uncharted domains, because they may point to potentially fruitful considerations for further study at a level of greater processural detail. In the area of familial influences on adolescent achievement, however, it appears as if social address studies have not led to further research of this sort. Rather, studies of demographic factors and their relation to adolescent achievement have apparently led only to more and more studies of social address, with emphasis placed on specifying the social address with greater precision (e.g., examining how different aspects of social address may interact)

rather than on uncovering important processes that make these demographic factors important. Not surprisingly, studies of social address and adolescent achievement have explained very little of the variance in student performance.

Socioeconomic status. The most widely studied familial variable in the literature on student achievement is socioeconomic status. This extensive literature has been reviewed on numerous occasions, and the interested reader is referred to these sources (e.g., Featherman, 1980). In general, studies consistently indicate that youngsters from lower socioeconomic strata achieve lower grades in school. As a result of this lower level of achievement, students from poorer families complete fewer years of schooling after high school and are more likely to leave high school prior to graduation than their more advantaged peers. These effects are found across racial, ethnic, and national groups and are apparent across various family structures as well. There is some evidence, however, that the impact of socioeconomic status on high school completion has diminished over the past decades but remains substantial in the prediction of post-high school attainment (Featherman, 1980).

Maternal employment. The data on maternal employment and its impact on adolescent achievement present a puzzling but nonetheless consistent picture. Like the literature on socioeconomic status, the literature on maternal employment has been reviewed extensively elsewhere (e.g., Bronfenbrenner & Crouter, 1982; Gold & Andres, 1978; Hoffman, 1980). In general, the impact of maternal employment on adolescent achievement appears to be moderated by social class, family structure, and the adolescent's sex, with maternal employment having a positive or neutral impact on scholastic achievement among all youngsters except boys from middle-class, two-parent households, for whom maternal employment appears to have deleterious consequences. The reasons for this pattern remain a mystery, but studies suggest that the adverse effects of maternal employment on middle-class boys in two-parent families appear to be more substantial during earlier periods of development than during later ones, suggesting that early maternal employment may have some sort of a disruptive effect on the young boy's development. Indeed, it even appears that the lagged effects of maternal employment during the preschool years on adolescent males' development may be stronger than the contemporaneous effects of maternal employment during adolescence per se (cf. Gold & Andres, 1978; Milne et al., 1986). This puzzle notwithstanding, it should be noted that the magnitude of maternal employment effects reported in most studies (whether the effect is positive or negative) appears to be modest when factors such as socioeconomic status, race, and family structure are taken into account (Heyns, 1982).

Family structure. The literature on the relation between family structure and student achievement presents a picture that is difficult to summarize and to interpret, for several reasons (but see Hetherington et al., 1982, for a review). First, studies that contrast youngsters from one- and two-parent homes often confound family structure with socioeconomic status and other factors that covary both with family structure and with academic achievement.

Second, studies contrasting adolescents from one- and two-parent homes rarely disentangle the effects of living with one parent (which may or may not be due to marital disruption) from those attributable specifically to parental divorce or separation. Finally, studies that focus specifically on divorce seldom take into account the age of the child at the time of the divorce or the amount of time elapsed between the divorce and the assessment of academic achievement. To the extent that the impact of divorce is either age- or time-dependent, studies that fail to take these factors into account will be difficult to interpret. In general, studies that simply compare youngsters from one- and two-parent homes without taking into account these considerations suggest that students from one-parent households achieve less in school than youngsters from two-parent households, but that the magnitude of the effect is small once socioeconomic status and other confounding factors are taken into account.

Studies of children's response to divorce suggest a somewhat less reassuring picture. Adjustment problems following a divorce are relatively common among students, even during adolescence, and problems are often manifested in behavioral and performance problems in school (e.g., Wallerstein & Kelly, 1980). Adjustment problems following a divorce are most often found among boys. Although this finding has been interpreted to indicate that boys may be more vulnerable to the adverse consequences of divorce than girls, an alternative explanation, supported by the few studies of children living under the custody of their father, is that divorce most adversely affects youngsters living under the custody of the opposite-sex parent (Hetherington & Camara, 1984). Most studies that follow children over time, however, indicate that these adjustment problems--regardless of the sex of the child--are temporary, and that the vast majority of youngsters from divorced households show few signs of disruption by two years after the divorce (Hetherington & Camara, 1984).

Scientific studies of children from stepfamilies are just beginning to appear in the literature, and, consequently, little is known about the academic achievement of these youngsters in comparison with their peers. Lessons learned from studies of divorce would seem to be helpful here, however, as preliminary evidence emerges suggesting that the process of reconstituting a family (like the process of marital disruption) may be more significant than the outcome of reconstitution. In general, remarriage appears to take a more profound psychological toll when it occurs during early adolescence (as opposed to childhood) and when the child involved is a girl living with her mother and stepfather (although we have insufficient evidence on boys living with father and stepmother to rule out alternative explanations) (see Hetherington & Camara, 1984).

Taken together, these studies of socioeconomic status, maternal employment, and family structure indicate that the impact of socioeconomic status on adolescent achievement, favoring more advantaged youth, appears to be far more substantial than the impact of either maternal employment or

family structure. When maternal employment or family structure effects are reported, they are generally small in magnitude and often disappear once appropriate controls for socioeconomic status have been introduced. Reviews of the literature consistently indicate that mean differences between youngsters from different maternal employment or family structure categories are less impressive than differences within the population of youngsters living under similar circumstances.

The pattern of findings reported in the literature suggests that variables other than maternal employment or family structure must play an important role in mediating and moderating the impact of these factors on student behavior. Some of these factors no doubt inhere in differences between families in the ways in which families respond to maternal employment or family structure; some no doubt inhere in differences between families that have little to do with maternal employment or family structure; still others no doubt inhere in differences in adolescents that moderate the impact of their parents' behavior. It would therefore seem appropriate to recommend that social scientists direct less attention toward simple contrasts among groups of families that differ with respect to maternal employment or family structure and direct more attention to the study of family processes that differentiate between successful and unsuccessful students within each category. It is to this literature, on family processes associated with student success, that we now turn.

Studies of Mediating Processes

Studies of processes of familial influence during adolescence are far fewer in number than studies of the overarching impact of socioeconomic status, maternal employment, or family structure. Evidently, social scientists have assumed that the family's role in the education of children is either fixed by adolescence (the prevailing view in most psychological studies) or more or less limited to the role it plays in placing the adolescent within a particular ecological context defined by class or household composition (the prevailing view in most sociological studies). We know very little about concrete behaviors that differentiate parents of successful high school students from parents of their less successful peers. (In contrast, far more research has been devoted to the study of parenting practices associated with school success among elementary school students [e.g., Hess & Holloway, 1984].)

The few existing studies in the adolescent literature that have yielded consistent results point to three sets of family process factors that appear to be related to high school student achievement: parental authoritativeness, parental involvement in schooling, and parental encouragement.

Parental authoritativeness. Several studies suggest that a constellation of variables described as parental authoritativeness is associated with school success among adolescents (for reviews, see Hill, 1980; Maccoby & Martin, 1983). Authoritative parenting, originally described by Baumrind (1978),

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combines high levels of parental acceptance and responsiveness with high levels of what Baumrind calls "demandingness." Parents who are demanding expect their children to behave responsibly and maturely, articulate clear and age-appropriate standards for their children's behavior, and enforce these standards through consistent, induction-oriented discipline. The benefits of various components of parental authoritativeness have been demonstrated across a wide variety of samples, including minority and nonminority youngsters from affluent as well as disadvantaged backgrounds (e.g., Clark, 1983; Dornbusch et al., 1987). Interestingly, the work of Dornbusch and colleagues suggests that parental consistency may play a special role in promoting school success during adolescence; although adolescents whose parents are consistently authoritative outperform their peers whose parents are consistently permissive or consistently autocratic, youngsters living in more consistently permissive or autocratic homes outperformed those whose parents used a mixture of autocratic and other approaches. It is likely that consistency is a component of parental demandingness (Maccoby & Martin, 1983).

Although systematic attempts to decompose parental authoritativeness during adolescence into its constituent components and link these components independently to aspects of school achievement are notably absent in the literature, there appears to be sufficient indirect evidence to lead to the cautious conclusion that it is the combination of warmth, psychological autonomy, and behavioral restrictiveness that is most strongly linked to adolescent achievement. (Although "demandingness" is an intuitively appealing concept, no standard measures of it exist, and it is impossible to say whether demandingness in and of itself is a correlate of school success during adolescence.) Authoritative homes are also characterized by high levels of dialogue between parents and children (this is generally correlated with parental acceptance), moderate amounts of structure (generally correlated with behavioral restrictiveness), and democratic patterns of decision-making (generally correlated with psychological autonomy). Although each of these components may contribute as well to higher levels of adolescent achievement, studies have not yet examined whether and how these components contribute above and beyond other measures of authoritativeness.

It is not yet entirely clear why authoritativeness has the benefits that it does, although the literatures on the consequences of various socialization practices (Maccoby & Martin, 1983) suggest at least four reasonable hypotheses. The first is that high levels of parental acceptance foster closer identification between adolescents and their parents and that parental identification, in turn, fosters school success (Hill, 1980). In theory, this should only be the case if authoritative parents themselves value and excel at academic pursuits, since identification promotes similarity between children and their parents. Although no evidence on this proposition exists, several studies suggest that parental authoritarianism is negatively related to the degree to which parents value self-direction, an important component of success in educational institutions (e.g., Kohn, 1977). Additionally, there is some evidence that adolescents who have close relations with their parents are more likely to

choose friends whose values parallel those of their parents. Thus, adolescents from authoritative households may be more likely to associate with both adults and peers who encourage academic success.

A second hypothesis is that authoritative parents, owing to their emphasis on psychological autonomy and parent-child dialogue, encourage the development of independence and self-reliance in their children, as well as the development of higher-order cognitive skills acquired through family discussion (Hill, 1980). It is reasonable to assume that these traits would contribute to success in school. In essence, it could be hypothesized that authoritative parenting contributes to the development of adolescent intellectual competence and responsible autonomy more generally, and that this is manifested in higher levels of school achievement.

A third hypothesis concerns the role of behavioral restrictiveness. Authoritative parents, owing to their higher levels of behavioral control, may monitor their child's activities more carefully, including his or her behaviors related to school. To the extent that completing homework assignments and studying for examinations contributes to school success, children raised by authoritative parents may spend more time on activities that enhance their school performance. At the same time, adolescents of authoritative parents may spend less time in activities that undermine school achievement, such as peer-related deviance or excessive commitment to a part-time job (Greenberger & Steinberg, 1986). Conversely, adolescents of behaviorally permissive parents may spend relatively more time in troublesome activities and relatively less time on schoolwork (cf. Dornbusch, Ritter & Fraleigh, 1987).

Finally, it is also possible that the connection between parental authoritativeness and adolescent achievement may be due to impact of adolescent competence on parental behavior, rather than vice-versa (see Lewis, 1981). Adolescents who are successful in school may elicit warmth and psychological autonomy from their parents (although it is difficult to imagine why adolescent competence might provoke greater behavioral control). Although the bidirectional nature of the parent-child relationship has been recognized (Maccoby & Martin, 1983), few empirical studies have put such models to the test. One exception is a recent study by Steinberg and Elmen (1988), in which aspects of authoritative parenting are used to predict student achievement one year later. The authors found that behavioral control, parental acceptance, and psychological autonomy all enhance school performance over time.

Parental involvement in schooling. Parents may also facilitate their adolescent's achievement through their own involvement in the youngster's schooling. This involvement may take the form of monitoring or checking over homework assignments, attending parent-teacher conferences, participating in school activities, or exposing the adolescent to cultural and related activities that may contribute to intellectual growth. Although it is reasonable to hypothesize that parental involvement in schooling facilitates school success,

few studies actually have examined this notion directly in samples of adolescent students. Three programs of work, however, are noteworthy.

In a series of studies of a national representative sample of elementary and secondary school students, Baker and Stevenson (1986; Stevenson & Baker, 1987) have demonstrated that parental involvement in schooling, through activities such as attendance at parent-teacher conferences, participation in parent-teacher organizations, such as the PTO, and influence over their child's selection of courses are predictive of student achievement. Although parental involvement, so defined, is correlated with family SES (as indexed by parental education), the relation between parental involvement and student achievement holds even after SES is controlled. Moreover, the relations among parental education, parental involvement, and student achievement are not influenced by maternal labor force participation or family size. Most important, perhaps, these authors find that parental involvement mediates the entire relation between SES and school success; their studies suggest that parental involvement may be an important link between social address and adolescent achievement. Stevenson and Baker (1987) also report that parental involvement declines with student age, suggesting that practitioners interested in achievement problems of adolescents may want to consider whether these problems stem, in part, from disengagement from school on the part of the adolescents' parents. An important caveat must be added to the story told by the Stevenson and Baker studies, however--the data are correlational. Thus, it is impossible to determine whether parental involvement actually leads to school success or, alternatively, whether student success promotes parental involvement. This question can only be answered with longitudinal data.

Studies of the relation between student achievement and parental involvement in youngsters' day-to-day homework activities, as opposed to school programs, have yielded inconsistent results (see Eastman, 1988). In some studies, this type of parental involvement is positively correlated with school success, whereas in others the relation is negative. This inconsistency derives in part from the lack of longitudinal research on this issue. While it is reasonable to hypothesize that parental involvement is likely to lead to school success, one might also argue that parental involvement itself follows from youngsters' difficulty in school. One hypothesis is that the relation between parental involvement in homework activities and student achievement is curvilinear, with highest levels of involvement among parents whose children are either very successful, or very unsuccessful, in school. Studies that simply correlate parental involvement and school performance at one point in time may inadvertently mix two very different causal mechanisms.

A second program of work relevant to the issue of parental involvement concerns the notion of "cultural capital" (DiMaggio, 1982). This work indicates that adolescents' exposure to and interest in cultural activities, such as attending the symphony, visiting art museums, or reading literature is associated with school achievement above and beyond the contribution of student ability or family background. In all likelihood, parents play a

fundamental role in exposing their children to these influences and in cultivating their interest in them. Interestingly, student interest and involvement in cultural activities was not strongly correlated with family social class, suggesting that measures of "cultural capital" tap something other than social status or parental education. According to DiMaggio, interest in cultural activities may promote upward mobility striving or identification with higher-status segments of society, leading to increased effort in school. The effects of "cultural capital" on school performance suggest that the impact of cultural activities on school performance may be moderated by both adolescent gender and SES, with effects greatest for low-SES boys and high-SES girls.

Finally, recent work by Coleman and Hoffer (1987) provides indirect evidence that parental involvement in a "functional community" of families that supports the school's goals and activities may facilitate school success. Functional communities are communities "in which social norms and sanctions, including those that cross generations, arise out of the social structure itself, and both reinforce and perpetuate that structure" (p. 7). Coleman and Hoffer base their argument on the finding that students attending Catholic schools outperform their counterparts in public or nonreligious private schools. This achievement difference cannot be attributed to differences in family background or student ability, differences between the schools with respect to economic resources, nor differences in students with respect to religiosity. Rather, Coleman and Hoffer argue that the achievement differential exists because Catholic schools, supported by a strong functional community of families, are able to educate more effectively. Presumably, the increased effectiveness stems from the support the school receives from a community of parents who not only share the school's orientation, but who, in their interaction with their children and with other families who are part of the same functional community, engage in behaviors that complement and strengthen the activities of teachers and other school personnel. In the absence of direct evidence of this effect, however, Coleman and Hoffer's argument remains an intriguing, but untested, hypothesis (see Steinberg, 1988, for a discussion).

Parental encouragement. In addition to the value of authoritative parenting and parental involvement in schooling, several studies indicate that students' level of educational attainment is strongly linked to the level of schooling their parents expect them to attain. The most significant evidence on the importance of parental expectations as an influence on educational attainment derives from the program of work carried out by Sewell and colleagues in their research on the persistence of socioeconomic status over time (e.g., Sewell & Hauser, 1972). In general, this work has identified two main sets of factors that contribute to the positive association between socioeconomic status and school achievement: scholastic ability, as indexed by intelligence and school grades; and social-psychological factors such as perceived encouragement of parents and teachers to continue in school, the educational plans of peers, and the student's own educational ambitions.

In particular, the effects of parental encouragement, peer plans, and the adolescent's own educational ambitions during high school are very substantial, and account for most of the variability in educational attainment attributable to social class. Taken together, the findings suggest that the impact of socioeconomic status on adolescent educational achievement is more likely mediated thorough familial and peer processes than through socioeconomic differences in intelligence or through differential experiences that middle- and working-class youngsters have in school. Indeed, parental and peer encouragement to continue on in school is more strongly linked to socioeconomic status than is teacher encouragement (see Featherman, 1980). Apart from modest differences in ability, the primary reason that youngsters from higher socioeconomic strata attain higher levels of education is that they receive more encouragement from their parents and friends to seek further schooling and develop higher expectations for themselves.

One study suggests that understanding the process through which educational expectations, rather than aspirations, are formed may be especially important. Socioeconomic differences in educational aspirations are less substantial than socioeconomic differences in educational expectations. By the end of high school, aspirations are similar across socioeconomic groups, but middle-class youngsters are more likely than their peers to expect to attain their desired level of schooling (Crowley & Shapiro, 1982). Although the development of parents' expectations and aspirations for their youngster is linked to the information they receive from their child's school about his or her performance there, the correlation between student performance and parental expectation is higher among parents from lower socioeconomic backgrounds. In other words, middle-class parents are more likely to expect their child to continue on in school in the face of incongruent evidence about their child's scholastic ability (Seginer, 1983).

Summary. It is difficult to integrate the literatures on parental authoritativeness, parental involvement, and parental encouragement, since the former two have focused most often on the prediction of success in high school while the latter has focused most often on adolescents' plans for the future. It is not clear whether or how parents' expectations for their children, their involvement in schooling, and their degree of authoritativeness are interrelated. Nonetheless, it seems reasonable to hypothesize that authoritativeness and involvement beget school success, which in turn breeds higher educational expectations on the part of adolescent and parent, and that higher educational expectations on the part of parents and adolescents in turn lead to even more diligence at school. At this point, however, it seems sensible to call for longitudinal research that examines the over-time interplay of parental authoritativeness, parental encouragement, parental involvement in school, and adolescent achievement.

The identification of three sets of familial factors that contribute to school success provides a foundation from which investigators can look more systematically at demographic variables such as socioeconomic status, family

structure, and maternal employment in relation to school achievement. We know that parental encouragement and parental involvement in school programs mediates much of the relation between socioeconomic status and educational attainment (comparable studies of family structure and maternal employment would be useful additions to the literature). We do not know whether or how differences in youngsters' school performance across various social addresses may be mediated by differences in levels of parental authoritativeness.

Studies of Person-Process-Context Interaction

Given the limited nature of the literature on family processes that are related to adolescent school achievement, it comes as no surprise to find that the study of characteristics of the adolescent that may moderate the impact of familial influences on scholastic achievement is exceedingly restricted. In general, the one variable that has received the most attention is the adolescent's sex. Two consistencies have emerged in this respect.

First, the sex of the adolescent appears to play an important role in moderating the impact of maternal employment and family structure. As noted above, among middle-class youngsters from two-parent households, maternal employment is associated with enhanced school success among girls but attenuated school performance among boys. And, also noted above, studies of family structure suggest that, among youngsters living with their mother following a divorce, the process of divorce appears to be more deleterious among boys than girls, but the process of remarriage appears to be more deleterious among girls than boys. Too little research has been conducted on youngsters living in father-custody homes to know whether these sex differences are to be found only under conditions of maternal custody or whether they apply to all youngsters from divorced households regardless of their post-divorce living arrangements.

Although studies have not yet suggested adequate explanations for these patterns of sex differences, a second, independent (but nonetheless informative) constellation of findings may help to illuminate the underlying processes. This pattern concerns sex differences in youngsters' responses to parental authoritativeness. In general, studies suggest that both boys and girls benefit from authoritative parenting. However, these same studies indicate that boys may be harmed more than girls by excessive behavioral permissiveness, while girls more than boys by excessive psychological control (e.g., Bronfenbrenner, 1961; Stein & Bailey, 1973).

The differential responses of boys and girls to variations from authoritativeness may account, in part, for sex differences in adolescent responses to maternal employment, divorce, and family structure. Specifically, if employed or divorced mothers behave more permissively than nonemployed or nondivorced mothers, we would expect to find that the effects of maternal employment or divorce would be more negative for boys than for girls. (Several studies indicate that single mothers are more permissive than married

mothers, e.g., Dornbusch et al., 1985.) If the process of remarriage, similarly, leads to increased psychological control, we would expect to find that this change in family structure would affect girls more detrimentally than boys.

Other than these studies of the moderating role of adolescent sex, too few person-process-context studies of the family's influence on adolescent achievement have been reported to draw any general conclusions about other moderating variables. Dornbusch et al.'s (1987) work on parenting practices and adolescent achievement across ethnic and socioeconomic groups reports more or less similar negative effects of authoritarianism and permissiveness, and similar positive effects of authoritativeness, across all of the groups studied, suggesting that the power of parental authoritativeness may have what Weisz (1978) has labelled "transcontextual validity".

Conclusions

The literature on familial influences on adolescent school achievement is composed mainly of "social address" studies that contrast the school performance of youngsters growing up in different social ecologies. This body of research indicates that social class is highly correlated with school success but that the relation between school performance and either family structure or maternal employment status, once social class is controlled, is far less substantial than is widely believed. Few studies have examined processes through which families exert an influence on youngsters' school performance or on student characteristics that moderate these effects. In general, the literature suggests that students perform better in school when they are raised in homes characterized by supportive and demanding parents, when their parents are involved in schooling, and when their parents encourage and expect academic achievement.

PEER INFLUENCES ON STUDENT ACHIEVEMENT

Like the family, peers comprise a complex network of relationships, whose influence on student achievement can operate at a several levels. Adolescent peer relations are commonly conceptualized as operating at three levels: the immediate, intense level of close friendships or romantic attachments (dyadic relations), the broader level of one's circle of friends (the clique), and the more amorphous and abstract level of one's "crowd" or peer culture (Brown, in press). It seems sensible that each level of peer interaction would feature different types and degrees of influence on student achievement, but to date researchers' tendency has been to generalize from whatever single level they are examining to peer relations as a whole.

Attempts to clarify peer influences also are compromised by a conceptual conundrum that most researchers fail to acknowledge, namely, that students are simultaneously the recipients and the generators of peer influence. In comparing the formal academic requirements (e.g., minimum grade average) for

extracurricular participation to the participants' grade point average, it is reasonable to suggest that the former "caused" the latter. In comparing achievement norms of a peer group to members' grade point average, causality is more problematic because members not only are affected by group norms but, in a very real sense, also determine the norms.

Studies of peer influences on high school achievement have highlighted four themes: the strength of peer influence as measured by the degree of similarity in academic aspirations or accomplishments between self and peers (usually one's close friend); the relative influence of parents versus peers on achievement patterns; the conflict between peer group norms, or cultural norms transmitted by peers, and achievement-oriented values; or the process of peer influence. As will be seen, some of these themes cross-cut the areas around which we have organized our review of findings. Also, because all students are part of a high school peer culture, even if they do not participate heavily in peer relationships, attempts to compare students who are part of a peer context to those who are not seem rather senseless. Thus, the section on simple studies of the peer context is skipped; research that might have been reviewed here is incorporated into our analysis of differentiated studies of peer context.

Differentiated Studies of Peers as a Context

The myth of monolithic peer influence. In his classic study of peer culture among Chicago-area high school students in the late 1950's, Coleman (1961a) found that most students regarded "getting good grades" as well down the list of prerequisites for being part of the elite crowd, although the salience of good grades did vary in accordance with the academic orientation of the community. He validated students' opinions by deriving several sociometric ratings of students' popularity among peers (average number of nominations by classmates as someone "popular with girls," as "someone you'd like to be friends with," etc.), then comparing the popularity of students regarded by peers as the best athletes to that of students regarded as the best scholars. Generally, across the ten schools in his sample, those regarded as both outstanding scholars and athletes enjoyed the highest popularity. Students recognized as just the best athletes had lower ratings on popularity, but considerably higher than those recognized only as outstanding scholars, whose ratings were only marginally higher than those of the average student. Coleman emphasized the consistent tendency across schools for peer norms to devalue academic achievement, concluding that the high school peer culture served to dampen students' intellectual interests and academic efforts.

Critics were quick to point out several ways in which Coleman (1961a) oversimplified these findings. First, Coleman painted an unduly pessimistic picture of the peer culture's regard for academic achievement. Although getting excellent grades was not highly regarded as a means of achieving high peer status in any of the schools, members of the leading crowd actually had

above average grades. Second, there were substantial differences across schools in the salience of academic achievement, suggesting that peer norms were not uniform and monolithic, but varied in accordance with the intellectual climate of the community. Finally, reanalyses of Coleman's data cast doubt on his contention that peer norms were uniform within the school. Cohen (1979) found evidence of three separate peer value systems in the data from one of Coleman's schools, and showed that the importance of academic achievement varied significantly among these three value orientations.

Strong evidence against Coleman's (1961a) conception of a monolithic peer culture also has appeared in ethnographic observations of high school peer systems, which have attempted to map out the major peer groups, or "crowds," within one high school and describe the salient characteristics of each crowd (Buff, 1970; Cusick, 1973; Larkin, 1979; Varenne, 1982). Although the number and types of crowds are not identical across studies, there are some common features across the sets of results. First, in all cases more than one crowd was identified, and crowds differed markedly in normative attitudes or behaviors. Second, academic orientation was an important dimension along which crowds differed, with some crowds being strongly oriented toward achievement, some oriented against it, and many groups in between. Finally, although the high school served as the point of initiation for crowds, academic achievement was not the major dimension along which crowds were differentiated.

Some ethnographers reported details of specific cliques that they observed (and participated in) for several months. These findings, to be examined in subsequent sections of this review, reveal important individual differences in adherence to group norms and provide glimpses of the process of peer influence within cliques. The point to emphasize here is that high schools encompass a complex array of peer cultures which differ on a number of dimensions, including academic interests and achievement. Whether these differences reflect preexisting differences among members of various groups, or differing socialization processes within crowds, or both, is a question we examine later. It is clear, however, that treating the peer group as a monolithic entity is likely to produce misleading and meaningless findings about peer influences on student achievement.

<u>"Similarity" studies</u>. Considering the variety of crowds that exist in most high schools, it would be wise to examine dyadic or clique influences on student achievement within the framework of the peer crowd system--to assess how dyadic and clique influences compare across crowds. Many investigators, however, have opted for a more basic approach: charting the degree of similarity in academic interests or achievement levels between individuals and their peers. "Peer" has been operationalized at all levels of peer relationships across this literature, from best friend to classmates as a whole, but the studies share the premise that students who have high-achieving peer associates (or friends with high educational aspirations) do better in school than students with low-achieving (or low aspiring) associates.

Ide, Parkerson, Haertel and Walberg (1981) performed a meta-analysis on ten such studies. They differed in measurement strategies and outcome variables, but virtually all shared the implicit assumption that the similarity observed between associates resulted from peer influence; there was no attempt to measure peer influence processes directly. Ide, et al. (1981) reported that the average correlation between individuals and comparison peer(s) on the outcome measure of achievement was $r = .24$. Correlations were stronger among older students, mixed gender samples, and samples in urban settings. In part, this may have been because variability on the achievement criteria was greater in these samples. More interesting was that correlations were higher in studies that compared respondents' self-reported achievement to their perceived achievement of their friend(s) than in studies comparing self-reported scores to those of a peer group defined by the researcher. Correlations were lower still in studies that compared self-reports (or actual scores) identified independently by both members of a friendship dyad. In other words, although it has rarely been demonstrated directly, it appears as if students' perceptions of similarity with friends on achievement variables exceeds their actual level of similarity.

Of course, the misperception of peers' achievement levels could be simply an effort to reduce cognitive dissonance: Because adolescent friendships are putatively founded on equality and reciprocity (Brown, 1981), students may distort their image of a friend's achievement level or interests to bring it more in line with their own. On the other hand, friendship norms may compel students to consciously hide or distort their academic abilities or aspirations when interacting with their friends, so as to maintain at least the semblance of similarity within the dyad. Cusick (1973), for example, found that grades and class work were rare topics of conversation among the cliques that he observed in one high school. If this is true in friendship dyads as well, it has interesting implications for the process of peer influence at the level of dyadic interactions. Unfortunately, research on similarity in achievement levels has not specified processes of peer influence within friendship dyads.

Criticisms of this line of research have not focused as much on researchers' failure to specify the process of peer influence as on the dubious assumption that peer similarity is adequate evidence of peer influence. Several short-term longitudinal studies have demonstrated that much of the similarity between friends in achievement orientations does not grow out of their relationship but predates it--and probably was one of the bases for initiating the friendship (Cohen, 1983; Epstein, 1983; Kandel, 1978). Cohen, for example, demonstrated that controlling for initial similarity reduced the correlation between peer's achievement aspirations by 50 to 100 percent.

Despite initial similarity, however, there is evidence that friends' academic attitudes or achievements grow more alike over the course of a year--that is, that friends have some influence on each other--especially among those who remain best friends over that period (Epstein, 1983; Kandel, 1978).

Epstein (1983) reported that peer influence was more noticeable in regard to college aspirations and achievement test scores than grade point average. In all cases, however, the magnitude of the effect of peer influence was small, and there was no indication of the process through which peer influence occurred.

Summary. That high schools comprise multiple peer cultures and that students with high-achieving friends do better in school than those with low-achieving friends are hardly startling discoveries. They are simply the empirical basis for exploring the more intriguing and meaningful question of how peers influence achievement patterns: What influence processes account for variations in achievement levels among different friendship dyads or different cliques or crowds?

Processes of Peer Influence

Interest in the processes by which peers influence student achievement patterns has focused on three major issues: the comparative influence of parents and peers; students' responses to the conflict between adhering to norms regulating peer popularity and striving to do well in school; and the degree and direction of school-related pressures students perceive from peers. Studies in each area vary in their attentiveness to individual differences or contextual factors that mediate influence processes. In this section we report on studies that pay minimal attention to such mediators. The next section will review studies with more elaborate research designs, including the entire literature on perceived peer pressures.

Comparisons of parent and peer influences. Assuming that parents and peers represent opposing influences on students' behavior, many investigators have presented respondents with hypothetical dilemmas in which parents and peers recommend opposite solutions, in order to measure how often, and on what issues, respondents conform to the advice of parents or peers (as opposed to deciding the dilemma based on the content of alternative solutions). Typically, conformity to parental advice has outweighed conformity to peer advice (Brittain, 1963; Larson, 1972), although in more recent studies there seems to be less reliance on either parents or peers (Sebald and White, 1980). For several reasons, however, these studies are not very enlightening: The magnitude of parental or peer influence on achievement patterns is not easily discernible from these studies because academic issues comprised a small proportion of the dilemmas presented to respondents. Also, one may question how closely responses to hypothetical situations correspond to responses to actual dilemmas encountered in school.

More importantly, there is growing evidence to counter the implicit assumption of the "hypothetical dilemma" studies, namely, that parents and peers exert influence primarily through overt pressure. Hunter (1985) queried adolescents about their discussions of various issues with parents and peers. In discussions of academic matters, parents were perceived as using explanation

(setting or reaffirming standards) more than understanding; the reverse was reported for discussions with peers. Students regarded discussions with peers as more mutual than with parents. In a study of a more racially and socioeconomically heterogeneous sample, Biddle, Bank, and Marlin (1980) concluded that peers seem to influence academic behaviors largely through modeling, whereas parents influence through setting norms. Using this distinction, Davies and Kandel (1981) found evidence that parents exerted greater influence than peers on student's achievement. The evidence is not entirely consistent, however. In interviews with a sample of 10th-grade boys, Stritchfield and Picou (1982) discovered that peers as well as parents (especially mothers) were named more often as definers than models. Teachers and other adult associates (excluding relatives) were more likely to be regarded as models than definers.

One other study of note, conducted by Natriello and McDill (1986) on a large and diverse sample of high school students, regarded both parents and peers, as well as teachers, as standard setters. Students' grade point average was correlated with their perception of the importance of good grades for peer popularity (peer standard), their report of the amount of work outside class required by teachers (teacher standard) and parents' requirements for time spend on homework (parental standard). Teachers' and peers' standards were positively correlated with grade point average, but, curiously, the correlation with parents' standards was negative. The authors argued that, in part, the negative correlation could be accounted for by the fact that high achieving students reported that parents had few demands about time spent on homework--ostensibly because the students completed homework without parental prompting.

Studies comparing the mechanisms of influence used by parents and peers, especially work such as that of Biddle et al. (1980), help to point out that influence processes are not equivalent across the various microsystems in which students participate. They reveal the extent to which peer influences are reinforced or countermanded by other sources of influence in the student's social world, and the extent to which peer influence waxes or wanes in different contexts. Yet, one must be mindful that adolescents are averse to viewing their friends as stepping out of a modeling role and exerting pressure or setting standards more directly. They prefer to see peer associations in reciprocal, egalitarian terms (Dunphy, 1963) and may underreport the extent or salience of peer influence as a consequence. Because researchers have relied upon student's <u>perceptions</u> of peer influence processes, rather than more direct observations of these processes, they may have underestimated the role peers play as definers as well as models of achievement behavior.

<u>Conflicts between achievement and peer group norms</u>. Coleman's (1961a) conclusion that high achievement seemed to work against obtaining membership in the elite crowd inspired several investigations of how students handle the conflict between doing well academically and achieving popularity or acceptance among peers. Ishiyama and Chabassol (1985) found that fear of

academic success was greater among girls than boys, and greater among middle school than high school students. This fear, however, was expressed not only in terms of the negative sanctions that high achievement would engender from peers, but also in terms of the fact that getting good grades would make one stand out among peers or would create an expectation for high achievement that would be difficult to maintain. In a similar vein, Golden and Cherry (1982) hypothesized that girls would perform worse on a test when they anticipated public rather than private feedback, and the performance difference would be greater for girls than boys. In fact, however, the hypothesis was supported only for average ability girls. High-ability girls, like high- and average-ability boys, actually did better when anticipating public feedback on the test.

To muddy the waters further, in a sample of 10th and 12th graders in five Canadian high schools, Schneider and Coutts (1985) found that peer influence seemed to be more negative for boys than girls. As in Coleman's (1961a) work, academic success was not viewed as an important factor in social acceptance by peers--but more so for boys than girls. Boys also were more likely to endorse such statements as, "I wish I could work harder in school, but I don't because of what my friends might think." Yet, not all schools manifest a conflict between peer popularity norms and achievement. Faunce (1984), for example, reported a remarkably high, positive correlation ($r = .73$) between students' grade point average and their peer status ranking among the seniors in one small, Midwestern high school.

These studies are as inconsistent in their methods as their findings. The reference group of peers, defined rather arbitrarily in all studies, varied from the student's circle of friends (Schneider and Coutts, 1985), to companions in a particular class (Golden and Cherry, 1982), to all students in the adolescent's grade (Faunce, 1984). It is doubtful that peer norms operated in equivalent ways across these levels of peer interaction. A student may be well aware of the criteria for acceptance by the leading crowd, but still have little interest in being part of this peer group (Brown and Lohr, 1987; Coleman, 1961a), so that its norms will have little bearing on his or her behavior. One may also wonder whether contextual factors such as school size, which varied considerably across studies, also influenced the operation of peer norms. In short, to sort out the inconsistent results of these studies, it is necessary to expand the scope of investigation to include individual and contextual variables as mediators of the peer influence processes under investigation.

Studies of Person-Process-Context Interaction

Two recent lines of research show promise of demonstrating how peer influences on achievement patterns are mediated by both individual and contextual factors. One is based on ethnographic methods, the other largely on self-report survey data. Although still in their formative stages, these lines of research point to a more differentiated pattern of peer influences that parallels recent studies of parental influences.

Ethnographic studies of specific peer cultures. A recent set of ethnographic studies has raised concerns about how norms discouraging achievement, which arise from the student's ethnic or minority group but are transmitted through peer group interactions, dissuade gifted students from striving for good grades in high school. In a study of Crucian students, Gibson (1982) noted that the norms of the male peer group emphasized qualities--such as toughness or boasting about sexual accomplishments--that were incompatible with the comportment expected in school by teachers. In order to maintain status in the peer group, males engaged in behavior that earned them a bad reputation among teachers and discouraged them from putting forth much effort in class. Labov (1982) found similar dynamics in a sample of American, inner city, ethnic youth. Poor reading scores were tied less to individual IQ or family background than to the conflict students faced between school culture and peer culture. The vernacular of the minority group culture, observed especially in conversations with peers, emphasized language markedly different than the "good English" expected in school. Students who spoke "school English" marked themselves as different and risked derision from peers.

Fordham and Ogbu (1986) elaborated on this argument, contending that despite advances toward racial equality over the past 20 years, the prejudices still encountered by certain minority groups--such as blacks--encourage the belief that one can achieve social and economic success in this country only by adopting the majority group cultural pattern. Thus, high-achieving black students must choose between maintaining their cultural roots or ethnic identity and striving for high achievement, which ethnic peers regard as an effort to act superior to their peers--to "act white." In the high school that Fordham and Ogbu observed, students feared being labeled by peers as a "brainiac," which, the authors argued, embodied the essence of "acting white." Many high-ability students curtailed their academic efforts in high school in order to escape the derision from peers that accompanied the brainiac label. Others, however, engaged in strategies similar to what Fuller (1984) noted among West Indies girls. They would do well in school subjects, but "cut up" or "clown around" when the teacher was not present in order to maintain their standing among peers. Their efforts to hide their achievement from peers, and their concerns about being found out, however, were an enormous psychological burden. This burden was lifted for the small group that Fordham and Ogbu observed who were placed in an environment in which all their peers were high achievers. In this context, in which high achievement was a uniform accomplishment, peer derision and labels such as "brainiac" were not evident.

Fordham and Ogbu's (1986) work illustrates the integration of person, process, and context in research on peer influences. Students with specific characteristics (intellectually gifted but interested in maintaining an ethnic identity) who are placed in a particular context (a mixed ability peer group in which many students regard school achievement negatively) struggle against peer influence processes that undermine their intellectual abilities, but

sometimes respond with a complex set of behaviors that allows them to continue achieving without sacrificing their standing among peers. Furthermore, when the context changes (being placed into a school or track in which all students are high achievers) the influence processes as well as the individual's responses are altered dramatically. There are limitations in Fordham and Ogbu's (1986) work, such as the tenuous tie between the "brainiac" label and the burden of "acting white," that must be faced in future studies. Others have noted that, even in all white schools, students in the brain crowd suffer some of the same prejudices from peers that Fordham and Ogbu note (Brown, Lohr, and Trujillo, 1983; Coleman, 1961a). Yet, the integration of person, process, and context that Fordham and Ogbu (1986) have achieved stands as a model for future investigations of peer influences on academic achievement.

A caveat from Cusick's (1973) ethnography, however, reminds us that peer influences are not necessarily as unilateral as one finds in the other noninstructional domains. Peer leaders or peer groups who exert influences that have some impact on academic achievement are subject to recriminations if they lead students too far astray from desired academic outcomes. Cusick (1973) describes a fascinating case in which a male clique decided to work together on a major project for humanities class. Jim, the most dominant member, encouraged the clique's natural inclination to turn classwork time into socializing time and postpone serious work on the assignment. As the deadline drew near, other clique members began working to salvage the project, but all members ultimately received low grades on the project, and Jim's grade was the worst. When the teacher commented to the group on their mediocre work--and Jim's poor leadership--group members voiced their resentment toward Jim with a barrage of sarcastic comments. Ultimately, Jim was displaced not only from his position of dominance, but from the group altogether.

Attempts to specify peer influence processes through survey data. Because the ethnographic methodology requires a focus on small groups of students, the generalizability of ethnographic findings is always tenuous. Ethnographers' focus on high school seniors also is worrisome in light of increasing evidence that peer influences change with age (Clasen and Brown, 1985; Ishiyama and Chabassol, 1985). Self-report survey data can examine peer influence processes across a broader cross-section of high school students.

Clasen and Brown (1985) asked high school students to indicate the magnitude and direction of peer pressure they felt from friends in a number of areas. School involvement pressures (getting good grades, getting along well with teachers, aspiring toward post-secondary education, etc.) were generally strong and positive across the high school years, but the strength of such pressures differed significantly among different school crowds: "Jocks" and "populars" reported significantly more pressure to do well in school than "toughs" and "druggies". Peer group differences in academic pressures from friends corresponded to differences in the stereotypic image that students had of each crowd, as well as to differences in academic interests and achievement

levels acknowledged by crowd members (Clasen and Brown, 1986). This suggests that pressures from peer group members influence student's academic efforts in high school, but the connection between crowd type and the nature of influence is still a tenuous one. In a separate investigation, Brown, Clasen, and Eicher (1986) reported that perceived pressures from peers explained a small but significant portion of the variance in self-reported misconduct, and that the association between perceived pressure and behavior was stronger for those who were relatively susceptible to peer pressure. Academic achievement was not at issue in this study, however.

Despite their limitations, studies of peer pressure again underscore the need for attention to person, process, and context. In this case, peer influence processes (the degree and direction of peer pressure toward school involvement) differed in various peer contexts (different peer groups, or "crowds"), and the degree of impact of peer pressure on students' behavior seemed dependent in part on individual characteristics such as one's susceptibility to peer pressure. Because both the salience of peer group membership and susceptibility to peer pressure change with age (Berndt, 1979; Brown, Clasen, and Eicher, 1986; Coleman, 1974; Steinberg and Silverberg, 1986), it is important to remain attentive to the developmental nature of peer pressure and peer influences. Furthermore, since susceptibility to parental influence also is shifting across the high school years (Berndt, 1979), a mesosystems analysis, assessing the convergence of parent and peer influences within a developmental framework, is likely to yield a more comprehensive understanding of peer influences on student achievement than the microsystems level analysis in which most studies have been framed.

Conclusions

It is difficult to draw conclusions about the magnitude--or even the direction--of influence that peers exert on student achievement. Clearly, however, we can reject the notion that peer influences are uniformly strong and negative. There is probably as much variability in the nature of peer influences as in parental influences on achievement.

As researchers pursue studies in this area, it will behoove them to be more attentive to the structure and dynamics of adolescent peer relations. Studies that locate respondents within the matrix of peer crowds or cultures in their school, understand the norms of each crowd, and attend to respondents' allegiance to their group (or the importance they assign to group membership) will fare better in describing the impact of peer influences. Researchers also should be attentive to developmental dynamics--to the fact that the strength and perhaps even the direction of peer norms concerning achievement may shift across the high school years. Similarly, students' reliance upon cliques or crowds--and therefore their concern with peer group norms--seems to diminish with age (Brown, Eicher, & Petrie, 1986; Larkin, 1979), and probably differs by individual student characteristics such as locus of control and

academic self-concept. These developmental and individual differences ought to be considered carefully in future research.

The fact that peer pressure or peer influence violates, in some respects, basic friendship norms, poses another challenge to researchers. The press toward acceptance and equality in adolescent friendships makes it difficult for students to be accurate observers or reporters of the amount of pressure they must endure from peers. Combining self-report studies with observations or ethnographic techniques is a more promising strategy for discerning the true magnitude of peer influence on achievement that high school students encounter.

These reservations notwithstanding, it is possible to make some general statements about peer influences on adolescent achievement. The weight of the evidence is that peers are not as influential as parents in shaping students' academic efforts or aspirations. On balance, most peers seem to encourage academic success (as opposed to failure), but are suspicious of outstanding achievement and intolerant of those who flaunt their scholastic accomplishments. Although students may need to struggle against the norms of their friends or their crowd, there is a choice of peer associates, and most students are able to align themselves with peers who share their academic interests and aspirations. This important difference between peer and family relations cannot be ignored by those interested in contrasting the two domains of influence. The freedom to select like-minded friends and to change associates as one's interests change naturally diminishes the power of peers to wield considerable influence over students.

THE INFLUENCE OF PART-TIME WORK ON STUDENT ACHIEVEMENT

Because working during the school year conceivably may have an impact on students' school attendance, school involvement, and school achievement, the world of work represents a potentially important domain of noninstructional influence on academic performance. The literature on the impact of part-time employment during the school year on adolescent achievement is relatively scant, however, because student employment was subject to very little empirical research prior to 1980.

Current estimates of high school students' participation in the part-time labor force indicate that the vast majority of students--over 80%--have school-year employment experience prior to graduation (Greenberger & Steinberg, 1986). According to data from the 1980 High School and Beyond survey, approximately half of all sophomores, two-thirds of all juniors, and three-fourths of all seniors, are in the labor force at any one point in time during the school year. Moreover, the time commitment of students to their jobs is substantial: the average working high school senior works about 20 hours per week (Lewin-Epstein, 1981).

Our concern is with whether, to what extent, and via which processes holding a job during the school year may enhance or diminish achievement in high school. Because our focus is on noninstructional influences on achievement, we do not review evidence concerning the impact of school-based career or vocational education programs on student performance and learning (but see Steinberg, 1982, for a review)[2]. Instead, we review studies of youngsters in the "naturally-occurring" labor force--that is, in jobs that were not developed with student education in mind. We caution the reader therefore not to generalize our conclusions to other, very different types of work experiences, including school-supervised job training programs, internships, or apprenticeships, or to work experience that is obtained through federally-, state-, or municipally-funded employment programs.

Several caveats are in order before we turn to a discussion of the research evidence. First, it is important to bear in mind the narrowness of the type of job opportunities open to students seeking employment in the naturally-occurring labor force when interpreting studies of the impact of work on student achievement. Students' jobs are primarily in the retail and service sectors of the economy, and a large number of them are in the food service (i.e., restaurant) industry. Although studies of the impact of working on schooling have thus far formed a fairly consistent pattern--that working in excess of 15 or 20 hours per week may have a negative impact on school performance--the consistency may inhere in part in the consistency of youngsters' experiences at work.

A second caveat concerns the issue of causality. Very little longitudinal work exists in this area of research. Although it does not appear that academically disenfranchised youngsters are disproportionately likely to hold jobs (they may be disproportionately likely to <u>seek</u> jobs, but the very same factors that impair their school performance may interfere with their labor market success), we are not sure whether students who are predisposed toward <u>becoming</u> disinterested in school are more likely to choose to work long hours. Thus far, research suggests that this is not the case--or, at the very least, that prework predispositions do not account entirely for the negative impact of employment on school achievement--but prospective studies of student employment are required before we can dismiss this possibility with any certainty.

<u>Simple Studies of Working and Student Achievement</u>

Analyses of student employment and its relation to GPA have focused both on work status (i.e., whether a student is employed or not) as well as work intensity (i.e., the number of hours per week the student works). (Studies of work intensity and its relation to school performance are discussed in the following section.) Much of this literature has been summarized by one of this report's authors elsewhere (Greenberger & Steinberg, 1986) and will not be discussed in detail here; studies published since Greenberger and Steinberg's review are discussed, however.

Working and school grades. Studies of GPA and work status based on simple contrasts between workers and nonworkers have yielded somewhat inconsistent findings. Although most researchers report differences in GPA between workers and nonworkers favoring nonworkers (e.g., McNeil, 1984; Mortimer & Finch, 1986; Steinberg et al., 1982a,), this finding is not always replicated (e.g., Lewin-Epstein, 1981; Steinberg et al., 1982b), and the absolute magnitude of the difference in grades is not great (i.e, it is enough to reach statistical significance but of arguable practical importance). Generally, the superior school performance of nonworkers is found both in studies that contrast workers and nonworkers while the workers are holding jobs, and in studies that compare youngsters who have had work experience at any time in their educational careers with their peers who have never worked. Because so few youngsters go through high school without any work experience, studies employing this latter strategy may be suspect to sampling problems. That is, the small minority of youth who resist working may differ from their peers in fundamental ways that may affect their GPA (e.g., they may be unusually concerned about academic achievement).

Students' reports of work interference. Although one must be cautious about accepting students' own assessments of the impact of working on their school performance, doing so may help clarify inconsistencies found in studies that employ more objective means of assessment. Unfortunately, the three studies that have asked students to estimate the effect of working on their school performance are inconclusive. In one, a substantial number of students viewed work as a source of interference with school achievement (McNeil, 1984); in another, about one-quarter of working students reported a drop in their grades as a result of working, but 15% reported an increase in performance (Greenberger & Steinberg, 1986); in a third, youngsters who were employed more than 20 hours per week did not report any more interference with school by their jobs than their peers who were less intensively employed (Wirtz et al., 1987).

Differentiated Studies of Working and Student Achievement

Several researchers have taken a more differentiated view of student employment in an effort to determine whether working conditions affect the relationship between part-time employment and school achievement. The two sets of work conditions most often investigated are (1) the type of job held and (2) the number of hours worked per week. In theory, working at a job that reinforces and encourages the use of school-taught skills should have a positive impact on school performance, while working at a job that interfered with students' completing school obligations (e.g., through job stress) should undermine school achievement. Similarly, one would expect that working long hours would exact a more negative toll on school performance than working few hours.

Contrasts of job types. Studies contrasting the school performance of students who are employed in different types of jobs are few in number. Most studies that have included youngsters from a variety of different sorts of jobs have nonetheless focused on contrasts between workers and nonworkers, ignoring potentially important differences among job experiences. In much the same way that scientists have taken a rather undifferentiated view of the peer group--treating it as a more or less monolithic influence--students of adolescent employment have assumed that "a job is a job" (but see Greenberger, Steinberg, and Ruggiero, 1982). We assume that differences among work experiences, like differences among peer groups, among families, or among extracurricular activities, are likely to be important mediators and moderators of the relation between school and work.

To a great extent, the high concentration of students in jobs that do not directly promote the use of school-taught skills makes comparisons of workers in "good" versus "bad" jobs difficult; the adolescent workplace is strikingly homogeneous. Greenberger and Steinberg (1986), using observational data, report, for example, the typical adolescent worker spends an exceedingly limited amount of time on the job in activities involving reading, writing, or performing arithmetic calculations--three job tasks that might be predicted to be correlated with better school performance. Food service workers, for example, who constitute the most sizeable proportion of student employees, spend less than 2 percent of their time at work--in other words, about one minute in every hour--on these three types of activities combined. Because this picture of adolescent job behavior is more or less characteristic of most adolescents' jobs--whether in the food service industry or not--comparisons of youngsters employed in different types of jobs in the naturally-occurring workplace are unlikely to reveal substantial differences in the effects of employment on schooling. Other factors that differentiate among adolescents' work experiences, including the intensity of their time commitment to the labor force, may be more important.

Weekly hours of employment. Inconsistencies in the literature contrasting the school performance of workers and nonworkers seem largely due to a failure to consider work intensity (i.e., hours of employment) as an explanatory variable. Virtually every study conducted to date indicates that school grades are negatively correlated with hours of employment (Greenberger & Steinberg, 1986; Bachman, Bare, & Frankie, 1986; Mortimer & Finch, 1986; Schill et al., 1985; Wirtz et al., 1987). (One recent exception is reported by Hotchkiss, 1986, however, who reports no relation between work hours and school achievement.) In general, an important threshold emerges in many studies at around 20 hours per week, with the most substantial negative effect on school performance appearing among youngsters working more than this amount. Differences among youngsters working various amounts of time below this threshold are less often found to be systematically related to GPA. Thus, rather than the relation being linear, the association between hours of work and school grades is modest up until the 20 hour mark is reached and substantial--and linear--thereafter. Although few studies have considered

individual differences in models of working and school achievement, there is some evidence that students who have lower prework grades may be more susceptible to the negative impact of working long hours than their higher-achieving peers (Greenberger & Steinberg, 1986).

Owing to the cross-sectional nature of much of this work it is not possible to tell how much of the association between long work hours and diminished school performance is due to differential selection (e.g., that academically poor, or potentially poor, students are more likely to choose to work long hours). Evidence exists on both sides of this issue. Mortimer and Finch (1986), for instance, demonstrate that work hours in tenth, eleventh, or twelfth grade are inversely related to GPA in ninth grade--that is, before most students have entered the labor force--lending some support to the notion that less talented, or less engaged, students may choose to work longer hours. Similarly, Lewin-Epstein (1981) reports that youngsters in the college prep track work, on average, fewer hours per week than students in the general or vocational track. At the same time, however, evidence suggests that the connection between working long hours and earning lower grades in school is apparent even among academically-oriented youth. Studies that have focused exclusively on college-bound youth (e.g., Bachman et al., 1986; Wirtz et al., 1987), have uncovered the same negative association between work hours and school achievement found in more heterogeneous samples of students.

A few longitudinal studies shed some light on the causal issue and suggest that future researchers must consider the age of the student at the time of labor force entry in order to see whether working long hours leads to diminished school performance. Thus, whereas Steinberg et al. (1982b), who followed sophomores and juniors into their junior and senior years did not find a strong over-time effect for work hours on school achievement, Finch and Mortimer (Finch & Mortimer, 1985; Mortimer & Finch, 1986), who studied youngsters from freshman year on, did. Greenberger and Steinberg (1986) tentatively concluded that the combination of early and intensive labor force experience (e.g., more than 20 hours per week during the sophomore year or before) places youngsters at risk for diminished grades. Even this level of involvement in work, however, appears to take only a very modest toll on grades--differences in GPA between intensive workers and nonworkers are on the order of one-half of a letter grade (Greenberger & Steinberg, 1986). Indeed, one might well ask why working at a part-time job for this amount of time does not depress academic achievement more than this. As we shall see below, one answer to this question is that strategies appear to be available to students for protecting their GPA against the adverse consequences of working.

Studies of Mediating Processes

We noted in previous sections that students' investment, or engagement, in school is likely to be an important mediator between noninstructional factors and actual school performance. It is therefore important to note that several studies indicate that working long hours may have an adverse impact

on student investment, and that this variable may mediate the relation between hours of employment and school performance. The literature is not entirely consistent, however.

Work and homework. Several researchers report that hours per week of employment is inversely related to hours spent on studies (e.g., Bachman et al., 1986; D'Amico, 1984); and several report specifically that students employed more than 20 hours per week spend less time on homework than their peers (Lewin-Epstein, 1981). The negative impact of working on homework is not reported uniformly across studies and that inconsistencies remain in the literature, however. For instance, Lewin-Epstein (1981) reports a negative impact of extensive employment on homework among seniors, but reports no similar impact among sophomores.

School involvement. Because there is evidence that very few American students--workers and nonworkers alike--spend much time on homework at all, studies using this variable as an indicator of student investment may suffer from a ceiling effect that attenuates variability in the outcome measure of interest. In concrete terms, it is unlikely for work to interfere with time spent on homework if little homework is assigned to students overall. Several studies have examined indices other than time spent on homework as indicators of student investment in studies of adolescent employment, and these studies corroborate the notion that working may undermine student investment. One study (Steinberg et al., 1982a), for example, suggests that the deleterious impact of intensive work experience on student investment is reflected in diminished school attendance, less involvement in school-sponsored extracurricular activities, and lower reported enjoyment of school. Another investigation indicates that students who work may select less challenging courses in which to enroll (McNeil, 1984). Yet a third investigation (Ruggiero, 1984) indicates that student workers may employ questionable strategies to cope with school demands, including cutting classes, cheating, copying other students' homework, and lying about having turned in required assignments. As Greenberger and Steinberg (1986) note, these behaviors "are possible responses to difficulty in keeping up one's school performance. That is, under pressure from work schedules or job stress, youngsters may be more likely to take shortcuts that are considered unacceptable by conventional standards" (p. 131).

As is the case with studies of work and GPA, however, studies of work and student investment are mainly cross-sectional in nature, and it is not entirely clear whether working long hours leads to diminished school investment or whether students who are less invested in school choose to invest more time in the workplace. Several studies indicate that the association may be a reciprocal one, with less involved students more likely to seek long hours of employment and with long hours of employment further undermining student investment (e.g., D'Amico, 1984; Steinberg et al., 1982a). More longitudinal work on the impact of employment on student investment is clearly called for.

Educational plans and adolescent employment. A second process through which working long hours may undermine school achievement is through the impact of working on students' plans for additional schooling. Owing to the virtual absence of long-term longitudinal research, however, little is known about the effects of part-time employment on educational aspirations or educational attainment. One study (D'Amico, 1984) found that intensive employment (in excess of 20 hours per week) during the sophomore and junior years may increase the likelihood of dropping out of school, but effects were limited to white male sophomores and while female juniors. Curiously, however, less intensive employment (e.g., less than 20 hours per week) was related to the increased likelihood of perseverance in school; again, however, effects were limited to subpopulations (whites of both sexes and black females in grade 11). Although the research was not longitudinal in nature, prior educational expectations were controlled. Despite this control, however, it is not clear from this study whether students who work a great deal have lower investment in school to begin with (and hence an increased propensity to drop out) or whether students who work only a moderate amount choose to do so because they are especially interested in protecting their educational careers (and have an increased propensity, apart from employment, to remain in school).

Little is also known about the impact of working on postsecondary educational plans. The one study of this (Mortimer & Finch, 1986) indicates that working long hours may depress male students' educational aspirations (females were not studied). Additionally, when these students were followed up five years after high school graduation, it was found that individuals who had less intensive work experience as high school students had achieved more years of education following high school.

Impact of employment on the school as an institution. The impact of working on student achievement is not limited to its effects on individual students. There is also reason to believe that a large number of student employees within a school changes the overall teaching and learning atmosphere and that the effects "spill over" into the experiences of nonworkers--yet another process through which intensive employment may affect student performance. In this case, however, studies of the school environment suggest processes through which workers may protect their grades against the ill effects of employment. A study by McNeil (1984) provides the clearest evidence of this. She found that widespread student employment lowered teachers' expectations of their students, leading to less homework being assigned and the increased use of class time for the completion of what normally would have been out-of-school assignments. Although teachers may be discouraged by the lack of interest in learning that may come with heavy commitment to a job, they are forced to adapt to classrooms full of students who are overly committed to working and who do not have the time, energy, or motivation to complete homework assignments. Similar, albeit anecdotal evidence is provided by Farrar et al. (1985), who note that some students view

school as their part-time job, something to be squeezed in during nonwork hours.

Although more evidence is clearly needed, studies like McNeil's suggest an important perspective to consider in interpreting studies of the impact of working on student performance, namely, that teachers and students may adapt to student work commitments in ways that may minimize the deleterious effects of working on student achievement. Studies like those of Ruggiero (1984) indicate that some of these strategies may be undesirable ones (e.g., cheating, turning in other students' assignments) rather than desirable ones (e.g., using more effective time management strategies). More work is needed on the strategies employed by teachers and students to protect student grades in the face of intensive commitment to part-time jobs.

In summary, with few exceptions, studies of work and student achievement do not focus on mediating processes. It appears that extensive involvement in a part-time job may undermine student achievement, but it is not clear why or through what mechanism this effect occurs. Based on current knowledge, one might hypothesize four basic mechanisms: (1) working undermines students' emotional attachment to school as an institution, and this takes its toll on school performance (e.g., Steinberg et al., 1982a); (2) working negatively affects students' ability to perform school responsibilities, such as homework, and this interference is reflected in diminished performance (e.g., McNeil, 1984); (3) working has a deleterious impact on student health and well-being (e.g., it increases fatigue or alcohol use) which in turn undermines school performance (e.g., Greenberger, Steinberg, & Vaux, 1981); and (4) working lowers students' interest in further educational attainment, thereby diminishing their motivation to succeed in school (e.g., D'Amico, 1984; Mortimer & Finch, 1986). Although each of these hypotheses is intriguing, the literature at this point in time does not permit a certain assessment of any of these explanations.

The failure of most studies to examine process is an exceedingly important limitation given the strong suspicion that pre-employment selection factors related to school investment may help to explain the differential performance of students with intensive versus moderate commitments to employment. Even in the face of evidence suggesting that working long hours leads to diminished school achievement, further studies of the underlying processes of influence are sorely needed.

Person-Process-Context Studies

Studies of student achievement have rarely considered individual variables that may interact with contextual factors. Apart from the handful of studies that take into account differences in effect as a function of student sex or age, we know little about differences between students that may differentiate between students who are harmed by extensive employment and those who may emerge from the experience unscathed--or perhaps even for the better. There

is some limited evidence, reviewed by Greenberger and Steinberg (1986), that students with relatively lower GPAs prior to becoming employed may have more to lose academically from intensive employment than their peers who achieve more in school to begin with, but there is also some evidence that the benefits of working to "practical knowledge" (knowledge about personal finance, about work, etc.) may be greater to academically less talented students than to their peers. More research is clearly needed to determine whether good and poor students are differentially affected by part-time employment. Even more complex, but also needed, are studies that examine contextual and individual variations in interaction with each other; these studies might examine whether certain types of students are differentially affected by different types of work.

Conclusions

In general, studies of working and student achievement suggest that extensive commitment to a part-time job may adversely affect high school students' school performance, but there are clear limitations to the data from which this tentative conclusion derives. Most of the studies are studies of context, in the sense that they attempt to relate student experiences in one context--the workplace--to their performance in another--school. Yet even as studies of context these inquiries are limited, for they take a rather undifferentiated view of student employment. The focus in recent years on weekly hours of employment as an important contextual variable is a step in the right direction, but more steps of this sort clearly need to be taken in order to begin to distinguish among work experiences. More important, research is clearly needed to illuminate the processes through which intensive employment may imperil school achievement.

THE INFLUENCE OF EXTRACURRICULAR PARTICIPATION

The study of extracurricular influences on academic achievement patterns of adolescents is by no means a new area of interest to educators or social scientists. In 1957, the Journal of Educational Sociology devoted an entire issue to athletic influences on achievement. Since then there has been a steady stream of reviews of research, mostly focusing on the effects of athletics (Bend & Petrie, 1977; Braddock, 1980; Otto, 1982; Phillips & Schafer, 1971; Rehberg, 1969; Shaw & Cordts, 1960; Stevenson, 1975). By and large, however, researchers have not embraced critics' consistent pleas for methodological improvements.

Five common shortcomings pervade empirical studies of extracurricular influences. First, despite the broad range of activities subsumed in the extracurricular program of most high schools, most studies have only addressed interscholastic athletics. Second, most researchers have drawn samples that are exclusively white, male, and comprised only of high school seniors. Third, contextual features that likely affect extracurricular influences--such as the size, value climate, or demographic characteristics of the school or community

from which the sample is drawn--are rarely considered in research designs. Fourth, samples are surprisingly dated; most studies report on students who were in high school in the 1950s or 1960s. Finally, despite the obvious need for longitudinal studies, investigators continue to rely on correlational data. Of the few longitudinal studies, many involve long-term follow-up assessments of post-secondary educational attainment, rather than short-term changes (freshman to senior year, or the semester before entering an activity versus the semester after) in academic interests or achievement. We suspect that these frequent methodological shortcomings stem in part from the absence of a comprehensive theoretical framework on which to base studies of extracurricular effects (Brown, 1988; Holland & Andre, 1987).

In reviewing the literature, we found a significant number of studies that, in examining variations in academic outcomes between extracurricular participants and nonparticipants, controlled for individual differences that predated participation. These studies, however, contained nothing more than speculation about the process of influence. Rather than distort the literature to fit our categories, we discuss these studies under the heading of person by context interaction.

Simple Studies of Context

Much of the early work on extracurricular influences came in response to Gordon's (1957) and Coleman's (1961b) assessments of the conflict between peer relationships and academic achievement in American high schools. Coleman (1960, 1961a) found that students identified as star athletes were more popular and more likely to be members of the leading crowd than those regarded as the best students. Midway through their first semester in high school, more freshmen were able to identify the best athlete in their class than the best student. Furthermore, there was a substantial correlation between the emphasis placed on academic achievement as a criterion for peer status and the degree to which students with the highest intellectual ability had the highest grades. Coleman suggested that in schools in which athletics, rather than academics, brings social rewards, bright students are less likely to put forth maximum effort in school work.

As Rehberg (1969) pointed out, Coleman's (1960, 1961b) stern conclusions about the negative effects of athletics on high school achievement ventured beyond his data. For example, neither time spent on homework nor college aspirations of students was associated with the emphasis on athletics in the school's value climate, and although Coleman implied that the pursuit of athletic glory distracted students from academics, outstanding athletes reported higher grade point averages than their classmates as a whole.

Nevertheless, Coleman's words inspired several attempts--most plagued by major design flaws--to marshal counterevidence, showing that athletic participation enhanced academic achievement. Stevenson (1975) reviewed these early studies. Typically, the studies offered a straightforward comparison of

grade point averages of athletes and nonathletes, with no control for preexisting differences between groups and no regard for such mediating factors as schools' academic eligibility requirements. In one case (McIntosh, 1966), the investigator naively used a measure of academic ability to argue for the positive effects of participation on academic achievement. The rather consistent finding in these studies was that athletes performed at least as well, if not better, than the nonathlete comparison group.

More recent studies in this vein have been less certain about the academic advantage enjoyed by athletes. Schumaker, Small, and Wood (1986) found athletes' GPA to be nonsignificantly higher than nonathletes, although the athlete group did score higher on a measure of self-concept. Employing data from Bachman et al.'s (1969) cross-national sample of high school seniors, Best (1985) found that a scale measuring the value placed on academic achievement did not significantly discriminate males who had participated in interscholastic sports from those who had not. Best concluded that the athletic environment does not appear to play a major role in the formation of academic achievement values. Based on quasi-longitudinal data, Lueptow and Kayser (1973-74) and Hauser and Lueptow (1978) found no greater increase over time in high school grades among athletes than nonathletes. They concluded that the group differences in GPA that others have observed are probably a function of preexisting differences between athletes and nonathletes, rather than factors associated directly with participation in high school sports.

Studies of Differentiated Context

The inconsistent results and conclusions across the aforementioned studies--despite their near-uniform focus on males and on athletics--demonstrate the need to control for individual differences and contextual effects in assessing extracurricular influences on achievement patterns. Many researchers have taken this need to heart. In most cases they have attempted to control for pre-existing differences between participants and nonparticipants, or at least have considered individual characteristics such as gender in their analyses. Because these are "person" variables, the bulk of this work is reviewed in a subsequent section. In addition to attending to person variables, some of these studies have differentiated among extracurricular contexts by comparing students with different extracurricular pursuits.

Achievement differences by type of sport. A few studies report differences in academic interests or achievement among students out for different sports teams. For example, in one table rarely reported by reviewers, Edwards (1967) lists the average GPA among athletes by type of sport. No statistical tests were performed on the data, but the figures are arresting, varying from a mean of GPA of 2.60 for tennis players to 2.11 for baseball players. The mean GPA's for those in individual sports (tennis, wrestling, track) all were higher than means for members of team sports

(football, basketball, baseball). In a different sample of roughly the same birth cohort, Schafer and Armer (1968) also found that athletes in "major" sports (football and basketball) had lower GPA's (M = 2.20) than those in "minor" sports (mostly individual sports, but including baseball) (M = 2.53). Neither study controlled for differences among members of various teams on key variables such as aptitude or SES, so one can conceive of a variety of explanations for the observed patterns.

In the only related study we found with a female sample, Snyder and Spreitzer (1977) compared educational aspirations of female gymnasts, runners, and basketball team members. The considerably higher aspirations of gymnasts were reduced to nonsignificance when several background variables were controlled for statistically. The background variables included factors that probably predated the girls' involvement in athletics, such as SES, as well as factors that may have resulted from their athletic participation, such as educational aspirations of friends or the degree to which teachers encouraged them to attend college. Although the samples and statistical analyses in these studies are too limited to allow for conclusive statements, they caution against treating athletics as a single, undifferentiated category in analyses of extracurricular influences on achievement patterns.

Studies of Person-Context Interactions

Several recent investigations of extracurricular influences have expanded the group of "person" variables, contextual variables, or outcome measures (or occasionally, all three) included in the study's design. Person variables have included factors known to be associated with educational expectations or achievement (especially SES, intellectual aptitude, and encouragement from parents to pursue higher education) that likely predate extracurricular participation. Extracurricular contexts have been expanded beyond athletics to include a comparison category (usually an amalgam of all other school-sponsored activities) or to focus on a general index of extracurricular participation (such as the number of activities or number of categories of activities in which the respondent has participated). Outcome measures have been expanded beyond grade point average to consider students' educational expectations (the highest educational level they plan to achieve), aspirations (the highest level they would like to achieve) or attainment (generally, whether or not they enrolled in or graduated from college). Of the many possible ways to organize a review of these studies, we have chosen to focus on outcome measures, first reviewing studies that deal only with high school GPA, then those that consider educational expectations or aspirations. Because of their more sophisticated design, longitudinal studies that focus on status attainment are discussed in a later section (studies of person-process-context interactions).

Academic achievement. Schafer and Armer's (1968) study aptly illustrates the importance of controlling for preexisting personal characteristics. In their sample of students from two Midwestern high schools, boys who had

participated in athletics had significantly higher GPA's than the mean of all other boys in their class. In comparison, however, to a sample of nonathletes who were matched with athletes on intellectual ability, father's occupation, curriculum track, and previous achievement (GPA the last year in junior high school), the GPA advantage of athletes diminished to apparent nonsignificance (no significance test was reported). Similar results appeared in a more recent and more sophisticated study by Feltz and Weiss (1984). Controlling for SES and "extent of involvement" (the number of seasons involved in each extracurricular activity, summed across activities) erased the significant differences in ACT scores among four categories of senior girls (classified by yearbook listings): athletics only, "service" activities only (rather ill defined), both, or neither.

Landers, Feltz, Obermeier, and Brouse (1978) examined gender differences in SAT scores between high school senior athletes who had versus had not also been involved in "service or leadership" activities (a category not clearly defined by the authors). In both schools in their sample, boys who were only in sports scored significantly lower than the comparison group, as well as below national norms for the SAT. Girls in one school showed the same pattern as boys, but in the other school the difference between the athlete-only and athlete/service groups was not significant, and both groups scored above national norms. Curiously, the authors tested schools and genders separately, rather than using a multivariate design to assess the statistical significance of gender and sample (school) as mediators of the association between participation and achievement.

Educational expectations/aspirations. Though few in number, these studies suggest that the academic advantage that early investigators found among athletes was mostly--if not wholly--a result of individual characteristics that led them into sports, rather than something gained through extracurricular participation. A similar theme is apparent in studies of students' educational expectations (how far they expect to go in school). The seminal work in this area is Rehberg and Schafer's (1968) comparison of participants and nonparticipants in interscholastic sports among senior boys in several Pennsylvania high schools. A significantly higher percentage of athletes than nonathletes expected to go on to college, even after controlling for class rank (academic achievement), father's occupation, and educational encouragement from parents. The difference was consistently greater among those who ranked low on the background variables, however.

Results similar to Rehberg and Schafer's appeared in later studies that examined educational aspirations instead of expectations (Schafer & Rehberg, 1970), in larger samples that included girls (Spreitzer & Pugh, 1973), in rural as well as urban schools (Picou & Curry, 1974) (like Schafer & Rehberg, this study focused on aspirations), and in analyses including activities beyond athletics (Snyder & Spreitzer, 1977). Despite some worrisome methodological shortcomings of these studies, there is a consistent pattern in their findings: Controlling for pre-existing differences between athletes and nonathletes,

educational expectations or aspirations are enhanced only very modestly by sports participation, and mainly among students whose background makes them less disposed toward higher education. Race also may be a factor, however--in a secondary analysis of a large national data set, Braddock (1981) found that controlling for SES and aptitude reduced the association between athletic participation and educational expectations more among whites than blacks.

Summary. Three important points emerge from these studies of person-by-context interactions. First, the academic advantages apparent among extracurricular participants (especially athletes) seem to be largely a function of personal characteristics that precede rather than result from participation. Second, where differences in academic outcomes do exist between participants and nonparticipants, they are most noticeable among those less disposed toward educational achievement to begin with. Third, these effects are conditional--varying among demographic groups (race or SES) as well as among extracurricular categories (athletics versus "service" activities). As researchers become more attentive to these intervening variables, they step closer to specifying the influence processes that account for the differences they observe. Let us examine what has been learned about these influence processes.

Studies of Influence Processes

For some time, researchers have speculated about the academic costs (e.g., Schafer and Armer, 1968) and benefits (e.g., Rehberg, 1969) that may accrue from extracurricular participation. There has been no comprehensive study of influence processes, but there is sufficient evidence to comment on four possible sources of influence. Two of these, focusing on ways fellow participants can influence achievement, are embedded in more sophisticated studies that will be discussed in the next section. The other two, influences stemming from differential contact with school adults, are summarized below.

Socialization into conventional values. Some investigators have argued that extracurricular activities are a clever ploy by school adults to coopt the adolescent social structure and its leaders and induce conformity to conventional values endorsed by school adults (Phillips & Schafer, 1971; Waller, 1932). Empirical evidence for this position is hard to find. Coleman's (1961b) controversial thesis, that athletes are part of a peer culture that alienates students from adult values, is supported in a later study by Snyder (1969). He assigned ratings to seniors in one high school that reflected their degree of extracurricular involvement and the social prestige of their activities. Students above the median on this measure were higher in ultimate educational attainment, but they were less interested than students below the median in being remembered as a brilliant student.

Preferential treatment by teachers. Extracurricular participants may reap academic benefits simply from their increased exposure to school adults. Jerome and Phillips (1971) speculated that because participants have greater

visibility, they may receive more academic assistance or encouragement toward higher education from school staff. Schafer and Rehberg (1970), for example, claimed that a higher proportion of athletes (70%) than nonathletes (60%) reported encouragement from teachers to get a college degree, but this difference may not have been a result of their extracurricular participation per se. When respondents were divided into three groups, according to their level of educational expectations, analyses of differences in teacher encouragement between athletes and nonathletes were consistently nonsignificant and approached significance only among those with the lowest expectations.

Snyder's (1972, 1975) data indicate, as one would expect, that high school athletes do not all receive the same level of teacher encouragement. Snyder reported a small but significant positive association between how definite players were about attending college and the amount of advice about college they received from coaches. Whereas students from lower SES backgrounds were nearly as likely to name their coach as a parent as the most influential person in formulating their educational plans, coaches finished a distant third (to father and mother) among higher SES students. Most interesting, however, was that players classified as starters or, especially, standouts, reported that coaches discussed and encouraged college attendance significantly more often than "substitutes" did--but this difference applied only to seniors.

Summary. Studies are too few in number and too limited in scope to permit anything more than tentative conclusions about extracurricular influence processes. As we have seen earlier, however, the evidence suggests that the academic benefits of extracurricular participation appear more substantial for those with less promising academic backgrounds or interests.

Studies of Person-Process-Context Interactions

Three longitudinal studies have taken a more sophisticated approach to extracurricular influences, integrating the study of influence processes in models that attend to the mediating effects of person and context variables. All three focus on the possible positive influence of peer group-based processes. Because the studies build upon the models and findings of their predecessors, they represent an historical line of investigation that has yielded much more compelling findings than most other studies we have reviewed. Two specific processes are addressed.

Influence through elevating perceived peer status. The first in this set of studies was Spady's (1970, 1971) four-year follow-up study of a sample of West Coast high school senior boys, surveyed initially in 1963. Agreeing with Coleman (1961a) that athletic participation enhanced students' status among peers, Spady speculated that athletes (as well as those in other prominent activities) would so value their peer status that they would strive to prolong it through achievement in the chief status arena of young adulthood, educational attainment. Thus, peer status obtained through extracurricular participation would foster higher educational aspirations and, ultimately, higher educational

attainment. Spady found conditional support for this intriguing hypothesis: Educational expectations were higher among extracurricular participants who were high versus low in perceived peer status, but only among students with relatively low grades. Educational attainment was associated significantly with perceived peer status only among students scoring low on the background variables (ability, GPA, SES). Educational attainment levels were higher among students involved in service (i.e., nonathletic) activities than among those in sports only or among those with extracurricular pursuits. Among those in service activities, attainment was somewhat higher for students with accurate versus inflated perceptions of peer status. Finally, whereas extracurricular participation, net other background differences, was not significantly associated with educational attainment, perceived peer status was negatively associated with attainment. The uneven sample distribution among comparison groups undermines confidence in the findings, but the data suggest that lower SES or ability students whose peer status is enhanced by extracurricular participation may be more likely to strive for higher education, yet also more likely to find their expectations dashed by the reality that they are not prepared (financially or intellectually) for college-level work.

Jerome and Phillips' (1971) caution that the mediating role of perceived peer status may be tied to American culture. They cite evidence from two longitudinal studies of Canadian adolescents--Jerome's unpublished work and King and Angi's (1968) study of hockey players--that athletes do not display the same advantages in GPA as nonathletes (controlling for background differences) and that the educational aspirations of hockey players shift from being higher than nonplayers freshman year to being significantly lower by senior year. The authors contended that Canadian adolescents value academic achievement more than their American counterparts, so Canadian athletes are less likely to enjoy the peer status and special attention that may account for higher achievement or aspiration levels found among their counterparts in American samples. Cultural differences also may be tied to the different recruiting practices of professional hockey versus the dominant American sports (football and basketball, which look to colleges as farm teams).

Association with academically-minded peers. As an alternative hypothesis, Otto (1975, 1976) proposed that in extracurricular activities students are exposed to a more academically oriented peer group which, by example or pressure, encourages higher achievement and aspirations among all participants. Otto drew his data from a longer term (15-year) follow-up of a 1957 sample of senior boys in one Midwestern school. He reported that "extracurricular participation" (number of categories of activities in which the student was involved) was significantly associated with educational attainment (years of formal schooling completed), although such participation added little (5%) to the variance in attainment already accounted for by SES, ability, and high school GPA (52%, collectively). In a later analysis of the same data set, focused on athletic participation in order to address Spady's hypothesis, Otto and Alwin (1977) found that perceived peer status explained little of the association between athletic participation (the number of athletic activities in

which the respondent engaged) and educational or occupational attainment. On the other hand, the influence of "significant others"--including the educational aspirations of close friends and the degree of encouragement toward college respondents received from girlfriends--significantly mediated the association between boys' athletic involvement and their level of educational aspiration. Parental encouragement of going on to college also was a significant mediator. In other words, the primary way in which athletic participation enhanced educational expectations or attainment levels was not through raising peer status but by suffusing participants in a more college-oriented peer group. Unfortunately, Otto and Alwin's operationalization of perceived peer status differed from Spady's, focusing on peer acceptance rather than status ranking among peers.

Other studies with less rigorous designs caution about cultural differences. Picou (1978) found that peers' aspirations significantly mediated the effects of athletic participation on educational aspirations among white males, but not among blacks. Warfield (1983) commented that whereas white athletes become members of the "leading crowd," and thus may be affected by that crowd's educational aspirations, black athletes are not accepted by this group, so that associations between sports involvement and educational aspirations among blacks must be a function of other processes.

The most rigorous and highly acclaimed longitudinal study of educational attainment also addresses Otto's hypothesis. Hanks and Eckland (1976) conducted a 15-year follow-up of a stratified portion of a national sample of high school sophomores (initially surveyed in 1955). The authors derived a comprehensive path analytic model of the causal links between most major variables used in previous studies. In testing this model they found that, controlling for background characteristics, athletic participation had no significant effect on high school GPA or educational attainment for either boys or girls, whereas among boys, participation in nonathletic activities had positive effects on both academic outcome variables. Interestingly, their findings reversed Otto and Alwin's (1977) causal assumptions, showing that association with college-oriented peers and educational aspirations as high school sophomores predicted boys' later athletic participation. They argued that if sports participation promotes contact with college-oriented peers, it does so only with fellow athletes, whose interest in college largely may be prompted by a desire to continue their athletic career, rather than to advance their educational level. Participation in "social" (nonathletic) extracurricular activities, however, did enhance contact with college-oriented peers for both genders, even controlling for the effects of peer contact that preceded the extracurricular involvement. Because many of the variables were measured retrospectively, however, one must be tentative about the study's findings.

Conclusions

The general impression that emerges from studies of extracurricular activities is that participation is more likely to enhance than interfere with

high school students' academic aspirations or achievement, but that controlling for background characteristics that differentiate participants from nonparticipants, the influence of extracurricular activities is modest and most noteworthy among students with the least promising backgrounds for academic success. A more elaborated account of extracurricular influences is compromised by the dramatic limitations (already outlined) of existing studies. Nevertheless, we have learned enough to conclude that, as with other noninstructional factors, the influence of extracurricular participation is neither monolithic nor unilateral. Researchers should abandon the basic question, "does extracurricular participation help or hinder academic achievement," in favor of asking of how, in what type of contexts, and for what type of individuals does extracurricular participation affect student achievement.

The practice of lumping all extracurricular activities together must be replaced with a more differentiated categorical scheme of extracurricular activities. "Sports" and "service" activities must be decomposed into more specific categories of activities. Measures of participation should move beyond dichotomizing people as involved or not involved to consider such factors as number of hours spent in activities, the degree of personal investment in the activity, the amount of personal gratification derived from the activity, and so on. Studies should attempt to incorporate into their design the full range of background characteristics that have been shown to mediate the influence of extracurricular activities. These include not only demographic characteristics (gender, race, parents' educational level, etc.) and academic ability or previous achievement level, but also factors represented in the other noninstructional areas, such as parental encouragement of education, reinforcement of achievement from one's peer group, or the competing demands of part-time employment. Little will be gained from further research unless it is attentive to the multiple noninstructional factors that modulate the specific influences on achievement that may arise from extracurricular participation.

As for specifying the process of extracurricular influence, two points should be emphasized. First, researchers should explore a more balanced menu of possible influence processes. To date, attention has been directed exclusively toward positive influences, ignoring the real possibility that--at least for some students in some activities under some circumstances--the demands of participation, the norms of the participant peer group, the expectations of peers or teachers, and the student's preoccupation with succeeding in the activity may either discourage achievement efforts or put undesirable limits on them. Approaching extracurricular activities as offering a trade-off of positive and negative influences is likely to provide a more realistic picture of their impact on student achievement.

A second comment on process is that investigators will learn more from short-term longitudinal studies than from the long-term follow-up or single measurement point correlational studies that dominate the literature to date. By systematically following students from nonparticipation through initial

participation to more extensive participation, charting students' decisions about quitting or continuing as well as the succession of academic influences that they encounter, studies can collect the data needed to provide a clear view of processes of peer influence. In this regard, researchers should stretch beyond reliance upon self-report data and what can be gleaned from yearbooks or school records of participation and achievement. It was a shock to uncover no studies that relied upon ethnographic or observational techniques--or even an extended interview--to gather information on extracurricular influences.

CONCLUDING COMMENTS

In this final section, we turn our attention to two questions that transcend the specific findings on how context, process and persons may affect the impact of family, peer, work, and extracurricular participation on high school student achievement. First, what overarching themes appear to characterize the process and nature of noninstructional influence across the four domains? Second, what are the most significant limitations of existing research across the four areas, and what are the major and most pressing gaps in the literature worthy of future research attention?

Overarching Themes

When examined concurrently, the literatures on different sources of noninstructional influence suggest four themes that may be useful in the development of a more general model for further work in this area. First, several lines of evidence point to the notion that students achieve more in school when significant others around them, in and outside of school, adults as well as peers, value academic achievement. This conclusion emerges from studies of family and peer influences, and is supported indirectly in the literature on extracurricular influence as well. Although no studies exist that directly examine this notion with respect to the adolescent workplace, it is reasonable to hypothesize that adolescents who work alongside peers and adults who value academic accomplishment fare better in school, other factors equal, than youngsters who work in environments where others do not share this belief.

Second, there is tentative support in the literature for the notion that students achieve more in school when those around them, especially adults, are proactively involved in behaviors that lead to academic success. These behaviors include, among others, monitoring of academic progress, supervision of academic and nonacademic behavior, involvement in school as an institution, and encouragement of higher levels of achievement. These behaviors are more effective when they occur in the context of an authoritative relationship characterized by warmth and demandingness on the part of the adult. We see evidence for this primarily in the literature on familial and, to a lesser extent, in the literature on extracurricular influences. Little is known about the role of peers or of workmates and work supervisors in this respect. Studies of the

peer group suggest, however, that adults may be more important influences on adolescents' school behavior than agemates, leading to the hypothesis that the presence of at least one authoritative adult in a high school student's social world--a parent, a coach, a teacher, or a work supervisor--may be more important than the presence of friends who are supportive of academic achievement.

Third, the literature suggests that competing demands from nonschool activities may depress academic performance when these demands are time-consuming and do not in and of themselves relate to academic responsibilities. This conclusion is most clearly supported in the literature on part-time employment and, indirectly, in the literature on extracurricular activity. Studies of the impact on academic achievement of comparable types of influence in the family (e.g., involvement in time-consuming household responsibilities) or in the peer group (e.g., involvement in a time-consuming friendship or social life) do not exist. Nonetheless, it seems reasonable to hypothesize that demands on youngsters' time and energy--whatever their source--can easily interfere with school success when these demands do not reinforce academic goals or school-taught skills. Further work is needed in order to determine various time and energy thresholds beyond which nonacademic activities begin to take their toll on school performance. The literature on part-time work indicates that many students have difficulty maintaining their school performance when their job involvement exceeds 20 hours weekly. Future research should examine whether a similar threshold exists in other noninstructional domains.

Finally, there is reason to believe that academically more marginal students are more susceptible to the effects--positive or negative--of noninstructional influences than are youngsters whose footing in school is more secure. Thus, youngsters who earn lower grades in school to begin with are more likely to benefit from supportive behaviors from adults and peers and more likely to suffer from the absence of such supports or from the competing demands of nonacademic activities. This conclusion is seen most clearly in the literatures on work and extracurricular influence, but is apparent as well, albeit indirectly, in the literature on peer influences. One important implication of this notion is that, statistically speaking, main effects of noninstructional influences are likely to be less impressive than interactive effects, and, consequently, that researchers who fail to differentiate between good and poor students in studies of noninstructional influences on academic achievement may miss important opportunities to discover the ways in which different students are differentially affected.

Past Limitations and Future Directions

Throughout this review, we have pointed to limitations in our understanding on noninstructional influences on student achievement on a domain-specific basis. Here, we briefly summarize our views concerning the

ways in which past research has hindered our knowledge and suggest several strategies for addressing these shortcomings.

First, there is a surprising absence of studies of mediating processes and moderating factors that link noninstructional experiences and school achievement, across all four domains of influence studied. The literature on the family is most advanced in this respect, but it is far from satisfactory. In general, the literature has identified several "laundry lists" of attributes and circumstances that differentiate successful from unsuccessful students, but goes little beyond this descriptive approach toward specifying why and how successful students outperform their peers. Virtually absent from the literature are studies that examine student and contextual influences in interaction with each other. In order to address this limitation, researchers will need to combine various approaches to data collection and incorporate psychological as well as sociological modes of inquiry into their research strategies. Studies of moderating factors, especially student ethnicity and prior levels of achievement, are sorely needed.

A second limitation concerns the rather undifferentiated view of contexts characteristic of most studies on this issue. Again, the literature on familial influences is more sophisticated than other bodies of work in this regard, but it is only slightly more informative. The literatures on peer, work, and extracurricular influence have improved in recent years, but still appear wedded at least in part to the notion that peer groups, work settings, and extracurricular contexts are monolithic influences, homogeneous in their impact on student performance. We find no evidence whatsoever to support this claim and believe, furthermore, that the failure of researchers to differentiate among work, peer, or extracurricular environments has contributed to the inconsistent and incomplete nature of the literatures in each of these areas. Thus, for example, rather than asking how peer groups influence academic achievement, a more appropriate question to pursue is why and through what processes do some peer groups promote school success among some students while others undermine it. We recognize that such questions will require more sophisticated theories and research designs, but we believe that the more simplistic approaches followed in the past have not paid off.

Third, there is a surprising lack of longitudinal evidence in the literature. Most of the findings are based on cross-sectional data and are exceedingly difficult to interpret as a result. This is a limitation that is pervasive across all four domains of research reviewed. Only longitudinal research can begin to separate the antecedents from the consequences of academic achievement; consequently, only longitudinal research can inform educational policy-makers and practitioners about changes in school practice and organization that are worthy of consideration.

Finally, with the exception of a handful of studies examining the simultaneous effects of parental and peer influences, no research has investigated the ways in which different domains of influence exert synergistic

or antagonistic effects on student achievement. Part of this limitation stems, we believe, from the general lack of interdisciplinary and multidisciplinary work within this field of inquiry. Thus, for example, the study of familial influences has been dominated by sociologists and, to a lesser extent, psychologists interested in socialization; the study of peer and work influences, by social and educational psychologists; and the study of extracurricular influences by sport psychologists and experts in leisure. There apparently is little communication across these bodies of work. In order for the field to progress, researchers will need to examine domains of influence contemporaneously and test models developed via studies of one set of influences in research examining other influences.

In conclusion, then, much work remains to be done if we are to better understand the ways in which adolescents' lives outside of the classroom influence their achievement and performance in school. The recent growth of the field of adolescence research provides an important foundation on which research into the nature and effects of noninstructional influences on high school student achievement can be studied. It is an opportune time, therefore, to begin to examine school achievement within the broader context in which young people live. Such an ecological perspective will necessitate process-oriented research employing longitudinal designs, multiple methods of assessment, and a strong multidisciplinary orientation.

ENDNOTES

[1]We employ the cumbersome term "noninstructional" rather than "nonschool" because many of the influences we discuss, while noninstructional in nature, nevertheless take place within the boundaries of the school. In particular, peer and extracurricular influences on adolescent achievement are likely to occur within the school's walls and during the course of the school day.

[2]These programs typically combine work experience with classroom instruction. As Hamilton (1980) has pointed out, evaluations of these efforts generally fail to disentangle the effects of the work experience component from those attributable to the student's classroom experience. Thus, it is somewhat of a misnomer to classify these programs as falling into the "noninstructional" category.

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